Ballona Wetlands Restoration
Science Advisory Committee (SAC) Meeting
October 20, 2005

Meeting Summary

Attendees:

SAC co-chairs:
Eric Stein, Southern California Coastal Water Research Project
Rich Ambrose, UCLA

SAC Members:
John Dixon, Coastal Commission
Phillipa Drennan, Loyola Marymount Univ.
Wayne Ferren, Maser Consulting
Michael Josselyn, Wetland Research Assoc.
Shelley Luce, Santa Monica Bay Restoration Commission
by conference call:
Ken Schwartz, Jones & Stokes
Joy Zedler, University of Wisconsin

Project Management Team:
Mary Small, SCC
Marc Beyeler, SCC
Terri Stewart, DFG
Brad Henderson, DFG

Consultant Team:
Jeremy Lowe, PWA
Jeff Haltiner, PWA
Don Danmeier, PWA
David Pohl, Weston Solutions
Art Barnett, Weston Solutions
Chris Nordby, Tierra Environmental
Jeff Thomas, EDAW

Interested Parties:
Gray O'Connor
Robert Roy Van de Hoek
Frank Wu
James Chieh
Isabelle Duvivier
MaLisa Martin
Kathryn Curtis
David Faught
Marcia Hanscom
Shannon Dellaquila
Jonathan Coffin
JB Froke

Introductions

Introductions of all present. The role of the SAC is to advise the project consulting team on the science issues related to the restoration planning. There will be a public meeting this evening to solicit input from stakeholders. All SAC meetings will be open to the public and there will be a public comment period at the end.

SAC Objectives

Stein introduced the SAC objectives and reviewed the handout. The SAC may be asked to address numerous issues during development of the Ballona wetlands restoration plan. However, the primary objective of the SAC is to address the following priority issues:

1. Guidance on additional data collection and modeling (if necessary)
2. Development of objectives for restoration
3. Development of criteria for evaluating alternatives
4. Development of restoration alternatives
5. Development of monitoring program

Discussion: Josselyn requested that we add more language about the science activities of the SAC and that we remove the assertions that the SAC will "develop" or be solely responsible for undertaking activities. Zedler suggested that adaptive management and active research be included in the objectives and that research opportunities be built into the project design. DFG will provide a list of all the research that has been approved on site to date. Stein requested input via email if possible on any further additions. A revised statement of objectives will be distributed.

General Procedures
Stein reviewed the operating procedures for the SAC. The co-chairs will coordinate the communication process. Email communication within the SAC will be sent to the whole distribution list. If other parties want the SAC to consider a topic, that request should be sent to Mary Small and she will forward to the co-chairs to consider. Sub-committees will be set up for specific topics, with at least one of the co-chairs participating on every subcommittee. Email discussion and discussion by sub-committees will be summarized and brought before the whole SAC and distributed to the stakeholder group. Recommendations from SAC to PMT will be made at SAC meetings.

Key Issues Discussion
Haltiner introduced the three issues discussion, stating that while there may be other critical issues these three are important to get early input on as they may affect the scope of the data collection work.

1. Regional Context: Is there information about historical changes in wetland types and acreages in the region that could be used to help determine the most important types of habitat to restore at this site?

Separate regional ecological needs from historic ecology. Historic ecology is important, but often hard to gather in a short time frame. Since it is not possible to go back in time, focus on what opportunities are present at this site that can benefit the resources in the region. Consider the types of habitat are being restored at other sites. Base decisions on the opportunities and constraints of the site in the context of regional ecological needs

Data sources: Josselyn and Ambrose suggested some sources on historic changes that the team could use—including watershed and Santa Monica Bay wide studies. Barnett's approach to the mapping of regional resources for the SCE selection process may be relevant. Look at the species lists in the Green Visions project. Try to update earlier work done for the San Dieguito restoration project to better characterize the regional extent of sensitive species and habitats.

2. Water Quality: Will poor water quality in Ballona Creek make it impossible to use the creek as a source of water to the restoration site?

There is very limited data on water and sediment quality in the Ballona Wetlands (Area B). This will be important in determining what the effect of the restoration will be on the wetlands. There is much better data available upstream of the project and at the mouth of the Creek.

Important to consider regional context to issue on pollutants; otherwise it will be difficult to understand the implications of the pollutant levels and/or loading. Many valuable wetlands in the region have water quality issues. This will be an important issue for permitting and may be a

longterm management monitoring question. Stein also raised the concern that the wetland project not become a source of water contamination. There will be a need to establish a decision framework for how to address water quality/toxicity concerns in the context of restoration design alternatives. Additional discussion of this topic will occur in a water quality subcommittee.

3. Preservation of Existing Habitat Needs: The site offers existing habitat, how do we compare the need to preserve that habitat with the need to restore other kinds of habitat?

This issue is related to, and perhaps subsumed into, the first one - regional habitat needs. Zedler stated that it is important that restoration of tidal habitat be given a priority for places such as Ballona where that is possible. Discussion of the need to plan for the next fifty years, site should be designed to accommodate sea level rise.

Other key issues:
Constraints analysis: What are the infrastructural and elevational constraints about some areas that affect the future design? Constraints analysis will need to adaptive and allow for ongoing discussion of constraints as new issues are identified.

Habitat sink: Will the site become a sink, need to know more about potential invaders, predators, etc.

Existing Data and Data Gaps
PWA prepared a table on biological/water quality data gaps that the team has been identified. Some of the data are needed for the design process; others will be needed for permit applications; some for CEQA documentation.

1. Biological issues

Data that are going to be collected: DFG stated that a vegetation map of the whole site will be prepared this winter/spring by the Department. Stein asked if this map could be used to field check the NWI mapping, answer yes. Given the timing, this map may be an addendum to the existing conditions report since it may not be available in time for the main report. Suggested that the DFG's map include mapping of predominance of wetland vegetation, final wetland delineation may be done closer to the project permitting. A graduate student is planning to map the distribution of ice plants in the wetlands, including native "iceplant". DFG is coordinating with the City's biologist to map ephemeral pools to look for fairy shrimp. Ferren recommended that we collect data on trematode parasite worms to study the before and after wetland condition as an assessment of the food webs in the future. There is currently a research proposal submitted to DFG from UCSB to study trematodes at Ballona and other Southern California wetlands.

Data Gaps: Josselyn suggested the Belding's savannah sparrow surveys in Areas A and C will be needed. Zedler asked about the presence of wandering skipper and DFG confirmed their presence. Dixon asked about coyotes and DFG stated that they were not present. Zedler asked about soils that may have been buried by the placement of fill. PWA does have some boring data in Areas A and C. Thomas asked that the SAC provide any references that are not on the list be sent to Mary Small and EDAW.

2. Water Quality
There are limited data on the marsh itself and we have better data on Ballona Creek watershed and the tidal portions of the Ballona Creek channel.

Data Gaps:
Data from sediment inside the wetlands, areas that have received water through the tide gate would provide information about accumulation of toxins. May also want to sample at Ballona Lagoon and Del Rey Lagoon.

Stein will establish a subcommittee on the water quality issue. The subcommittee will look into where and what type of sampling might be done with a focus on stratification of the sampling effort. Sediment quality should also be incorporated into this plan; especially for areas that may need to be excavated and the materials placed somewhere else, e.g. ocean or uplands. May also look at bacteria —especially as it relates to beach closures.

Ferren noted that he was troubled by fragmenting the system into separate units (e.g., the Ballona "estuary" versus the "wetland") as it really should be considered as an entire "estuarine" unit.

Hydrodynamic Modeling Approach
Hydrology modeling discussion led by Danmeier. Stein mentioned that a modeling subcommittee has met to discuss the needs and focus on the type of models that might be used for the design. PWA circulated a matrix of the model evaluation. The three uses of the models are to (1) look at water levels and circulation; (2) fate and transport of WQ; and (3) patterns of deposition and erosion in the restored areas. Could also look at sea level rise effects.
PWA developed a table to compare the effectiveness of the various models. PWA has the greatest experience with the MIKE suite of models. Danmeier then reviewed the various attributes that a model must accomplish.

Stein asked PWA to update review based on new information that the EFDC model is being used in the Ballona system for water quality to develop a linked water quality model and it is also used at the Port of LA and in the Dominguez watershed. Using the same model may help calibrate it and allow for better coordination. Important to be able to model water quality. Comparative cost analysis is unclear, MIKE is most expensive software to buy but may have shortest run times and lowest user costs.

SAC asked that PWA re-examine the comparison in light of the discussion today and come back with a revised recommendation or re-affirmation of the MIKE model. Specific additional issues to be evaluated include opportunity for collaboration with other regional efforts, Corps certification, open source code, ease of interface for communication with the public and refined cost analysis. Also important to consider how different modeling options would support different phases of the project life cycle (data collection, develop concept, refine concept, develop alts, select alt, conduct environ. compliance, permitting, support eng design, support construction, support monitoring and adaptive mgmt, etc...). In addition the evaluation parameters should be categorized in terms of issues that affect model structure, run time (efficiency), and ability to communicate output.

Ferren wanted to know how the formal decision process would go especially if the consultant team and the SAC differ. Ultimately, the PMT will decide, PMT would like SAC to provide recommendation at its next meeting. It was decided that the subcommittee will continue this discussion and will then report back to the SAC at its November 11th meeting.

Corps noted that if the model used is not certified by the Corps (MIKE is not certified by the Corps since it has not been peer-reviewed), they would not accept the model results. This

criterion should be in the evaluation analysis. In addition, the calibration data availability also needs to be considered

Dixon asked if sensitivity analysis be tested on each of the models and the Corps noted that one needs to understand the level of detail needed to develop the conceptual model.

Public Comment

Robert 'Roy' Van de Hoek (Ballona Institute)
Introduced himself as a citizen scientist that is doing research on the Ballona wetlands. Thanked DFG for being present and appreciated opportunity to participate in the meeting. The model should be useful to biologists and activitists and politicians. He noted that stripped mullet and round stingrays do not use the tidegate but do access area A through the culvert. Endangered species as a goal should also include soon to be listed species— see plants on the CNPS 1B and 2 list. Wants some emphasis on the Ventura marsh milk vetch as a part of the restoration process. Recommended that SAC consult with 2-3 entomologists to be sure we have the insects covered.

Marcia Hanscom (WAN and Sierra Club)
Past wetland delineation and surveys were politically driven and should be redone. Use the Coastal Commission definition for wetlands. In her view, the data are inaccurate if the work was paid by PVC. There has never been a sufficient survey of the biological resources on the site. Fish surveys should be done for Area A and Area C. The data on invertebrates, especially pollinators, should be collected. She echoed Van de Hoek's recommendation to include species not historically known for the wetlands, but that are regionally scarce. She also noted that the City is looking at a system to automate all the tide gates and that should be considered for Ballona wetlands.

Jim Chieh (Corps) noted that the selection of the model will be important and once that is done, the Corps would like to have a revised schedule so that coordination between the Corps and PWA can occur.

Jeff Froke (California Wildlife Ecology) discussed his interest in historic ecology. He was part of the first science team, Audubon project in the 1980s. Currently working on herons and egrets at Marina del Rey. He has observed kites as well and will be following up on kite breeding in the future. He wanted to underscore the need to know more about prey items, i.e. small rodents. He anticipates undertaking a rodent survey and will contact DFG to get permission to accomplish.

Shannon Dellaquila (Corps) commented that graphic visualization is important for the public to understand the alternatives and it should be coupled to GIS to provide more useful graphical analysis. The spatial analysis program was used to develop a 3 D model for subterranean profiling.

Jonathan Coffin noted that he is a photographer and showed some of the photos he has taken of the site.

Action items

- Revise the objectives and goals for the SAC
- Recast the key issues document in light of the discussion of the SAC
- Data gap matrix will be revised to reflect discussion

- Subcommittee will be formed on water quality data gaps
    - Will look at strategy to look at sampling the sediments
- Modeling evaluation matrix will be reviewed and revised and reviewed by the subcommittee and will bring it back to the full SAC at its next meeting.

Next steps

- Next meeting on November 11th
- Need to discuss baseline monitoring and pre-project and post-project monitoring
- Need to refine objectives for the restoration project since the consultant and working group will be formulating their ideas.